Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of:	**)**	
	)	**PS Docket No. 10-255**
Framework For	**)**	
Next Generation 911 Deployment	**)**	

REPLY COMMENTS OF INTRADO INC. AND INTRADO COMMUNICATIONS INC.

Intrado Inc. and Intrado Communications Inc. (Intrado) respectfully submit the following reply comments.

I. INTRODUCTION

Intrado's reply comments focus primarily on the use of Short Message Service (SMS) text messaging as a way for the public to request emergency assistance. The initial comments submitted on this issue were mixed. Some commenters expressed steadfast opposition to the use of the existing SMS infrastructure for any 9-1-1 service,[1] while others invited further consideration of SMS as an interim solution.[2] Intrado offers a description of its deployment of a successful text to 9-1-1 service as additional information with which the Federal Communications Commission (Commission or FCC) and the public can evaluate the merits of using SMS text messaging to allow those who cannot or who are not in a position to speak to reach 9-1-1 emergency assistance. Additionally, in accord with another commenter, Intrado urges the Commission to obtain additional comments regarding the obligations and responsibilities of service providers and public safety answering points (PSAPs) in a next

[1] *See* Comments of AT&T at 4; Comments of T-Mobile USA, Inc. at 8-9.

[2] *See* Comments of TeleCommunication Systems, Inc. at 2-7; Comments of Rehabilitation Research Center on Telecommunications Access at 2; Comments of Motorola Solutions, Inc. at 1-3.

generation 9-1-1 (NG 9-1-1) environment where the Incumbent Local Exchange Carrier (ILEC) selective router will no longer be the demarcation point between them.

A. TEXTING TO 9-1-1

Intrado has developed, tested and deployed an interim solution enabling text messaging to and from PSAPs.[3] The service utilizes the SMS network and an emergency text gateway that functions as the interface between the wireless service providers and PSAPs. The technology employed is very straightforward and utilizes systems and standards already deployed in wireless carriers' networks. When an individual initiates an emergency text message, the mobile device sends the SMS short code, "9-1-1", to the device's home short message service center (SMSC) which automatically sends an acknowledgement to the mobile device and then sends the message over redundant trunks to an Emergency Text Gateway (ETG).

The ETG performs two important functions. First, it performs location determination and/or coordination. Upon a mobile device's initial text to 9-1-1, the ETG will determine the appropriate PSAP to which to route the text request for assistance (RFA). The routing will be based upon user provided location (city or zip code) or the location of the cell tower to which the mobile device is connected. Cell tower location is the current mechanism used by wireless carriers to determine the appropriate PSAP for 9-1-1 voice calls.

Additionally, the ETG functions to link text messages to create a "multi-message conversation" between the mobile device that initiated the text and the responding PSAP call taker. In other words, in the course of a conversation, messages from the texter will always be received by the same PSAP call taker. The text message will appear on the PSAP's call handling equipment in a manner operationally similar to a voice call. The PSAP station will ring, and when the call taker answers the text RFA, the text message, along with any known location (city,

[3] Intrado's Text2911® service.

zip code or location of the cell tower), will be displayed on the PSAP equipment. (An example of a screen shot is provided in Attachment A.) From this point, until the PSAP call taker releases the conversation, the SMS messages to and from the text initiator and the PSAP call taker will be linked.

The SMS text message solution can be implemented so that mis-sequenced or delayed text messages are not realistic concerns. When a text message is sent to 9-1-1, the message goes from the handset to the cell tower and through the carrier's network to the SMSC assigned to that mobile device. When the SMSC successfully receives the message, it acknowledges the receipt of the message and sends that acknowledgement back to the mobile device. At that point, the device will mark the message as sent. When a PSAP sends a response back to the text initiator, it goes from the PSAP to a SMSC and through the carrier's network to the mobile device. When the mobile device receives the message, it acknowledges the message and that acknowledgement can be sent back to the message center and on to the caller taker's screen, letting the call taker know that the message was successfully delivered. (Attachment B depicts the flow of the text message to and from the 9-1-1 call taker.)

Reliability is ensured through operational procedures, such as building redundant links between the SMSCs and the ETG and either using separate priority queues within existing SMSCs or using dedicated 9-1-1 SMSCs. To minimize delays, 9-1-1 text messages can be placed in separate queues (distinct from user-to-user messages) in the wireless carrier's network. This approach is analogous to how a metered on-ramp for a busy freeway works, with 2 lanes—one with a stoplight for regular cars and the other directly onto the highway for HOV vehicles. The HOV vehicles are able to bypass the long queues at the onramp and enter directly onto the highway.

SPAM and Spoofing do not occur in the text solution because, as with 9-1-1 voice calls, the text messages are in a closed system. Only SMS messages from valid participating United States carrier cell phones will route to 9-1-1. Moreover, because the messages are linked and the PSAP has control of the call, the user cannot send multiple, simultaneous calls to the same or a different 9-1-1 entity.

In order to receive emergency text messages, a PSAP needs only a broadband connection from its premises to the gateway and either upgraded display equipment or an application that adapts existing PSAP equipment. An added value of a gateway between the wireless carriers and PSAPs is that the gateway can adapt to technological changes so that PSAP do not have to change their interfaces and carriers can support different text technologies (such as SMS and Real Time Text) to different PSAP technologies, thereby reducing the difficulty of transition initially and as new technologies are introduced in the future.

A voice call to 9-1-1 is always preferable—where it is can be made. And while SMS text messaging to 9-1-1 does not have all of the same attributes of a voice call, it is undeniably an urgently-needed, reliable, interim alternative that would benefit the public.

B. RESPONSIBILITIES RELATED TO A CHANGE IN THE DEMARCATION POINT

In its discussion regarding PSAP readiness for NG9-1-1, T-Mobile raises an issue that is critical to PSAPs and service providers in a next generation environment and should not be overlooked as the Commission endeavors to define NG9-1-1: what will be the respective obligations of service providers and PSAPs when the ILEC selective router is no longer the demarcation point between them.[4] Sensible and efficient cost allocations, prudent investment

[4] Comments of T-Mobile USA, Inc. at 4 ("In addition, the delineation of responsibilities between service providers and PSAPs must also be clear because, in the NG9-1-1 network, there will no longer be a selective router to form the demarcation point between the PSAP and service provider responsibilities.")

decisions and other drivers of technology and policy decisions depend on early indications and a timely determination of the NG9-1-1 demarcation point. Therefore, the Commission should explore this issue at the outset, soliciting specific comments from all interested parties, including originating service providers, access providers, 9-1-1 service providers, state public utility commissions and state 9-1-1 authorities regarding the options and ramifications of this inevitable and significant change.

III. CONCLUSION

The Commission and the public should consider the benefits of SMS text messaging to 911 and investigate the issues related to the change in the demarcation point in a NG9-1-1 environment.

Respectfully submitted,

INTRADO INC.
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/s/_____

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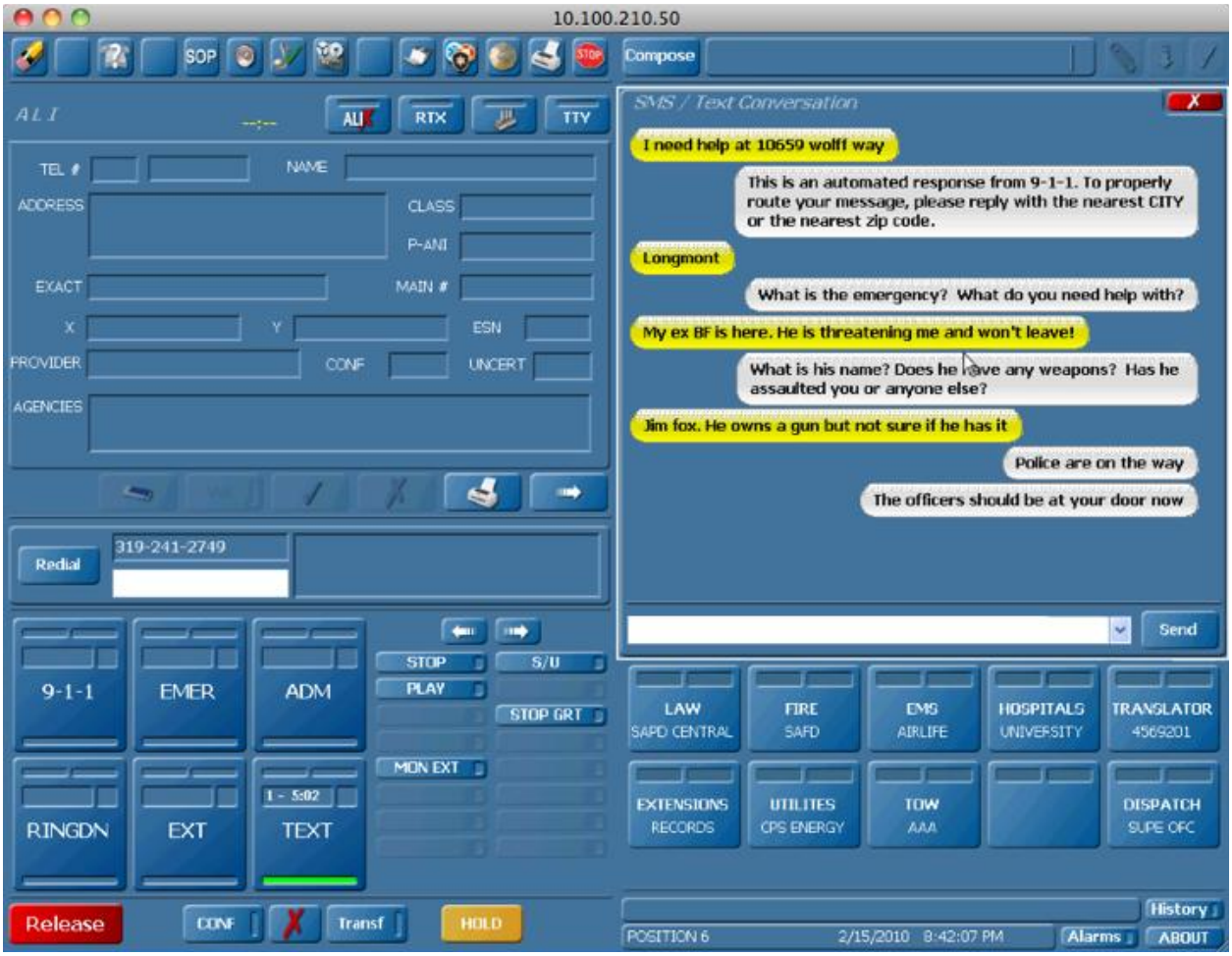
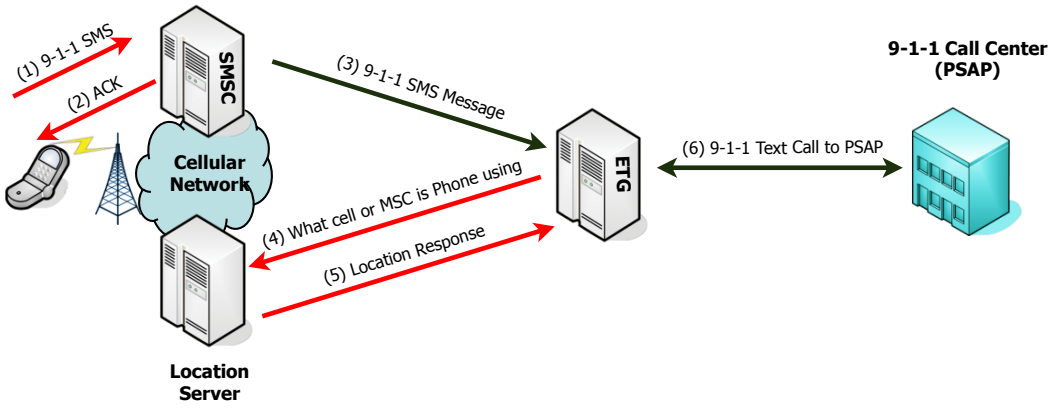
ATTACHMENT A



ATTACHMENT B

User to 9-1-1 Text Messages



9-1-1 to Caller Text Messages